in which the quartz film is a quartz epitaxial thin film; and

in which the buffer layer is disposed between said substrate and said quartz thin film, and wherein the buffer layer is GaN or ZnO.

22. An article comprising a quartz thin film grown on a substrate under atmospheric pressure,

wherein the quartz thin film comprises a deposit formed from at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane; and

wherein the substrate comprises a material selected from the group consisting of sapphire, silicon, and GaAs; and which further comprises a third layer which is a buffer layer which is disposed between said substrate and said quartz thin film, wherein the buffer layer is GaN or ZnO.—

23. The quartz thin film of Claim 1, made by contacting a composite under atmospheric pressure with a composition comprising oxygen, HCl and a silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane.

24. The quartz thin film of claim 23 wherein the composition provides a reaction product consists essentially of quartz.

25. The quartz thin film of Claim 24, wherein the composition provides a reaction product consists of quartz.

26. The article of Claim 14, made by contacting a composite under atmospheric pressure with a composition comprising oxygen, HCl and a silicon alkoxide

selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane.

C1 end

27. The article of Claim 26 wherein the composition provides a reaction product which consists essentially of quartz.

28. The quartz thin film of Claim 27, wherein the said composition consists essentially of a reaction product of oxygen, HCl and said silicon alkoxide.--

Please amend claims 1, 8, 10 , 14, 16 and 18 as follows:

C2

1. (Amended) A quartz thin film made by depositing at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane on a substrate under atmospheric pressure,

wherein a buffer layer is disposed between the quartz thin film and the substrate; and

wherein the quartz thin film is a quartz epitaxial thin film; and

wherein the buffer layer comprises a hexagonal system crystal phase material .

C3

8. (Amended) The article of Claim 1 wherein said epitaxial layer is characterized by an X-ray diffraction profile exhibiting a diffraction peak at $2\theta=50.6^{\circ}$.

C4

10. (Amended)The article of Claim 1,wherein the buffer layer is GaN or ZnO.

C5

14. (Amended) An article comprising a quartz thin film grown on a substrate under atmospheric pressure,

wherein the quartz thin film comprises a deposit formed from at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane;

wherein the substrate comprises a material selected from the group consisting of sapphire, silicon, and GaAs; and

a buffer layer

wherein the buffer layer is disposed between said substrate and said quartz thin film and

wherein said buffer layer comprises a hexagonal system crystal phase. --

C6 16. (Amended) The article of Claim 14, wherein the buffer layer is GaN or ZnO.

C7 18. (Amended) The article of Claim 14, wherein the substrate comprises sapphire.

REMARKS

Reconsideration of the outstanding Office Action is respectfully solicited.

The title of this application of which appears in the heading of this paper is the title on the substitute specification filed December 31, 2002.

Claims 21 and 22 are claims 10 and 16 rewritten in the independent form. Claims 23 et seq are based on the specification at page 4, first full paragraph and page 11 last 4 lines, which describes the purity of applicants' article.

Claims 1 and 14 have been amended to include the recitations of Claims 2 and 9 [claims 2 and 9 being cancelled hereby], so that the buffer layer can be defined as comprising hexagonal system crystal phase material. This amendment of claims 1 and 14 is supported by specification page 7 last paragraph.

Applicants respectfully request reconsideration of the finality of the outstanding Office Action. Tanaka et al is newly cited. The only change in claim 1 presented in the prior response [to the first Official Action on the merits] was a translation correction in the preamble. In applicants' view, that amendment would not necessitate a new search.